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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,276	10/17/2001	Kave Eshghi	10015123-1	6378

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HEWLETT-PACKARD COMPANY  
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Fort Collins, CO 80527-2400

EXAMINER
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HAMZA, FARUK

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/981,276

Applicant(s)

ESHGHI ET AL.

Examiner

Faruk Hamza

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

1. This communication is responsive to the amendment filed on April 12, 2005.

Claims 1-16 are now pending.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1,2,3,8,9,14,15 are rejected under 35 U.S.C. 102(e) as being anticipated by Hoang et al. (U.S. Patent Number 6,499,052), hereinafter referred to as Hoang.

Hoang teaches the invention explicitly as claimed including a system and method for storing cookies on a middle server and retrieving and updating the cookies for subsequent requests (see abstract).

As to claim 1, Hoang teaches a data service system, comprising:

a plurality of web servers, each servicing any request received by the data service System; (Fig. 1, Column 5, lines 1-5, Fig. 5).

a plurality of application servers, each processing any request directed from any one of the web servers; (Fig.1, Column 5, lines 1-5, Fig. 5).

a session state information managing system called by each of the application servers to allow different application servers to process requests belonging to a single session without requiring the requests to carry their entire session state information,

wherein processing of each of the requests requires the session state information of that request. (Column 6, lines 5-29)

As to claim 2, Hoang teaches the data service system of claim 1, wherein the session state information managing system further comprises a session state information manager called by any one of the application servers when that application server processes a request of a session to (1) provide the session state information of the request to the application server and (2) generate a state reference for a new session state information for that request after the application server has processed the request and generated the new session state information for that request; (Column 9, lines 25-35)

a store that stores all session state information received by the session state information manager. (Column 9, lines 25-29)

As to claim 3, Hoang teaches the data service system of claim 2, wherein the state reference generated is unique to the corresponding session state information and is a short and fixed length character string. (Column 6, lines 5-17)

As to claim 8, Hoang teaches a session state information managing system in a data service system having a plurality of duplicate application servers, each for processing requests, comprising:

a session state information manager called by any one of the application servers when that application server processes a request of a session to (1) provide the session state information of the request to the application server and (2) generate a state reference for a new session state information for that request after the application

server has processed the request and generated the new session state information for that request;

a store that stores all session state information received by the session state information manager. (Column 5, lines 30-39)

As to claim 9, Hoang teaches the session state information managing system of claim 8, wherein the state reference generated is unique to the corresponding session state information and is a short and fixed length character string. (Column 6, lines 5-9)

As to claim 14, Hoang teaches a method of allowing different application servers in a data service system to process requests belonging to a single session, comprising

(A) determining if a request starts a session; if the request initiates the session, then

(B 1) processing the request in one of the application servers and sending session state information of the request to a session state information manager; (Column 9, lines 43-60)

(B2) receiving a state reference unique to the session state information from the session state information manager and attaching the state reference to the response to the request; (Column 9, lines 25-36)

if the request does not start the session, then

(C1) retrieving the session state information associated with the request from the session state information manager using a state reference contained in the request; (Column 6, lines 18-29)

(C2) processing the request with the retrieved session state information in one of the application servers and generating a new session state information; (Column 9, lines 61-67)

(C3) sending the new session state information of the request to the session state information manager to receive a new state reference unique to the new session state information and attaching the state reference to the response to the request. (Column 10, lines 27-36)

As to claim 15, Hoang teaches the method of claim 14, wherein the step (C1) further comprises the steps of verifying the session state information retried; if the session state information is not verifiable, then performing the step (B 1);

if the session state information is verified, then performing the step (C2). (Column 10, lines 1-14)

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-7, 10-13 and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Hoang as applied to above.

As to claims 4 and 10, Hoang teaches the data service system of claims 3 and 9 respectively, wherein the session state information manager generates the state

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reference by mapping the session state information to a sequence of bytes using a marshaling algorithm;

mapping the sequence of bytes to a digest using a cryptographic algorithm (see col. 1 lines 60-col. 2 lines 5);

mapping the digest to the character string using an encoding algorithm, thus forming the state reference. (Column 5, lines 41-58). However, Hoang doesn't explicitly indicate using of any cryptographic hashing to generate and manage session state information. However, hashing is well know in the art as evident by "Microsoft Computer Dictionary", 5<sup>th</sup> edition. It would have been obvious for one of the ordinary skill in the art at the time of the invention to modify Hoang by using cryptographic hashing to enhance the security of the communication over the network.

As to claims 5 and 11, Hoang teaches the data service system of claims 4 and 10 respectively, wherein the marshaling algorithm further comprises the property that can un-marshall the sequence of bytes into a replica of the session state information data structure without any loss of data. (Column 5, lines 41-58)

As to claims 6 and 12, Hoang teaches the data service system of claims 4 and 10 respectively, wherein the digest mapped by the cryptographic hash algorithm is a fixed length, short sequence of bytes that is unique to the sequence of bytes. (Column 5, lines 41-58).

As to claims 7 and 13, Hoang teaches the data service system of claims 4 and 10 respectively, wherein the encoding algorithm maps each byte in the digest to its

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hexadecimal representation, and creates the resulting character string. (Column 5, lines 41-58)

As to claim 16, Hoang teaches the method of claim 14, wherein the session state information manager generates the State reference by mapping the session state information to a sequence of bytes using a marshaling algorithm;

mapping the sequence of bytes to a digest using a cryptographic algorithm;

mapping the digest to the character string using an encoding algorithm,

thus forming the state reference. (Column 5, lines 41-58).

However, Hoang doesn't explicitly indicate using of any cryptographic hashing to generate and manage session state information. However, hashing is well known in the art as evident by "Microsoft Computer Dictionary", 5<sup>th</sup> edition. It would have been obvious for one of the ordinary skill in the art at the time of the invention to modify Hoang by using cryptographic hashing to enhance the security of the communication over the network.

### ***Response to Arguments***

5. Applicant's arguments filed on April 13, 2005 have been fully considered but they are not persuasive.

In the remarks, the applicant argues in substance that; A) Hoang doesn't teach plural web servers and application servers; B) No suggestion or motivation to establish a prima facie case of obviousness.

In response to A) Fig. 5 shows Merchant sites 1 to N connected to a number of internet provider networks that provide connection to local access provider, which then



provide access to network service providers. Network service providers then connect to network access providers. It shows a plurality of web servers is connected to a plurality of merchant sites or application servers. Therefore the teaching of Hoang meets the claimed limitation of "a plurality of web servers" and "a plurality of application servers".

In response to B) In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case Hoang doesn't explicitly indicate using of any cryptographic hashing to generate and manage session state information. However, hashing is well known in the art as evident by "Microsoft Computer Dictionary", 5<sup>th</sup> edition. It would have been obvious for one of the ordinary skill in the art at the time of the invention to modify Hoang by using cryptographic hashing to enhance the security of the communication over the network.

### ***Conclusion***

**5. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faruk Hamza whose telephone number is 571-272-7969. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached at 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll -free).

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PATENT EXAMINER